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ABSTRACT

A discussion of survey methodology for investigating second language programs and instruction examines two methods: oral interviews and written questionnaires. Each method is defined, and variations are explored. For interviews, this includes individual, group, and telephone interviews. For questionnaires, this includes self-administered and group-administered forms. Uses of information resulting from surveys are noted, including curriculum development, analysis of program needs, program evaluation, and other forms of language program research such as student characteristics and attitudes. Six steps in a survey research project are specified: planning the project; designing the survey instrument; gathering and compiling survey information; statistical analysis of results; logical analysis of results; and reporting results. Functions of the survey, which can stand alone or be combined in either questionnaire or interview, are discussed. They include collection of demographic information, investigation of opinion, self-ratings, gathering of information about judgments, rankings, and Q-sorts. Guidelines for writing good survey questions and effective questionnaires and for avoiding survey pitfalls are offered, with examples. Suggestions are also made for increasing mail survey return rate and tabulating and analyzing both open- and closed-ended responses. Contains 34 references. (MSE)

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Chapter 9

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Designing Surveys for Language Programs

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A language survey is any procedure which gathers information about participants' characteristics and views on the nature of language or language learning through the use of oral interviews or written questionnaires. In this paper, I will begin by examining the different types of surveys, including both interviews and questionnaires. I will then discuss how language surveys can be used for language curriculum development and research. I will continue by exploring the specific functions that surveys can perform. The next two sections will provide a set of guidelines for writing effective survey questions along with discussion of the issues involved in achieving a good return rate. I will then present a brief section on analyzing survey results and will end the paper with suggestions for further reading.

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Types of Surveys

As shown in Table 1, surveys can take two basic forms: interviews (including individual, group, and telephone interviews) and questionnaires (including self-administered or group administered questionnaires). Each of these categories and subcategories merits a bit more discussion.

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Table 1
Types of Survey Procedures

Type of Survey	Procedures
Interviews	Individual
	Group
	Telephone
Questionnaires	Self-administered
	Group-administered

Interviews

Interviews are procedures for gathering information orally in specific, planned categories (if the interview is well structured in advance) as well as information that was not anticipated at the outset. Interviews can be conducted in three ways: individually, in groups, or by telephone.

Individual interviews are interviews conducted with participants on a one-to-one bases. Such interviews gather information privately, so a certain level of confidentiality can be maintained. As a result, individual interviews have the advantage (over group interviews) of collecting something close to the true views of the participants. However, such interviews also have the disadvantage of being relatively time-consuming. As a result, individual interviews may be most effective for finding out which questions, views, or issues are worthy of later follow-up study using more structured group interviews or questionnaires, both of which can be administered much more efficiently than individual interviews.

Group interviews, which are interviews conducted in a group or meeting format, can be used to circumvent the time-consuming nature of individual interviews. However, group interviews also have the disadvantage of lacking confidentiality. For personal, political, or emotional reasons, the opinions expressed when participants are in a group interview may be quite different from the views expressed when they are interviewed individually and confidentially.

Telephone interviews sometimes provide a useful compromise in that they are confidential and somewhat less time-consuming (saving the time necessary to travel to the participants). However, there are also several disadvantages that must be considered in using this type of interview: (a) in a telephone interview, some information may be lost because the interviewer cannot see the facial expressions, gestures, and surroundings of the participants; (b) a telephone survey also precludes the possibility of showing participants anything during the interview; and (c) at least in the United States, many people have become wary of telephone sales promotions and surveys and may not cooperate.

Questionnaires

The various types of interviews can clearly be used to explore the questions, topics, views, opinions, etc. of participants in a particular language teaching institution. However, if these points are worth pursuing on a larger scale, questionnaires may prove much more efficient. A *questionnaire* is any written instrument that presents participants with a series of questions or statements to which they should react either by selecting from existing possibilities or writing out their answers. Questionnaires are particularly efficient for gathering information on a large scale. For example, an interview with a few of the participants in a language program might be helpful in designing a questionnaire, but the questionnaire itself would be much more practical to administer to all of the participants. Most questionnaires are the self-administered type. A *self-administered questionnaire* is usually mailed out and filled out by the participants in their own homes or offices (i.e., they are self-administered) and then returned by mail. Self-administered questionnaires have three potential problems: (a) they often have a very low return rate, (b) they must be completely self-explanatory because further clarification is not possible, and (c) they are administered under conditions that are unknown to the survey designers. A *group-administered questionnaire* is any questionnaire which is administered to participants while they are in class or at a meeting. For example, if I wanted to survey a particular group of students, I could go to their classes and ask their teachers to let me use the 15 to 20 minutes necessary for the students to fill out my questionnaire. By using such a strategy, I would solve all three of the problems listed in the previous paragraph for the self-administered questionnaires: (a) the students will be a captive audience and will feel obliged to fill out the questionnaire (thus giving me a high return rate), (b) I can be present to explain any ambiguities as they arise, and (c) I will know exactly what conditions existed when the questionnaires were filled out.

Uses for Language Surveys

Surveys are most commonly used in language education for curriculum development and for research. Language programs provide a service to students who want to learn the language in question. If the program is interested in what these *clients* think, then some form of curriculum analysis and research will probably be desirable because the best way to find out what people are thinking about any aspect of a language program is to ask them.

Surveys for Curriculum Development

The two elements of curriculum development wherein survey research is most useful are needs analysis and program evaluation (for more details on what all of these elements are, see Brown, 1989, 1995a). While surveys can be used to

investigate many elements of a curriculum (including objectives, tests, materials, and teaching), it is needs analysis and program evaluation that most often require surveys.

Needs analysis. Needs analysis in language programs is often thought of asthe study of the language forms students will need to use in the target language when they actually try to communicate. The focus is usually on the learners, and their needs are most often stated as linguistic needs. In fact, focusing on the learners in a needs analysis seems reasonable. After all, they are the clients; and the needs of the clients should be met. However, this view may be shortsighted because teachers, administrators, parents, employers, institutions, and even nations may also have needs that should not be overlooked in doing a needs analysis for a particular language program. Needs analysis should probably focus on the language needs of students, but must recognize that students also have other needs, called in Brown (1995a) "situational needs." Situational needs include all of the learners needs as human beings. This means that the definition of needs analysis should be fairly broad. For instance, *needs analysis* might be defined as the systematic collection and analysis of all relevant information necessary to meet the language learning needs of the students within the context of the particular institutions involved in the learning and teaching situation. Since needs analysis relies on input from a variety of different groups about the students' linguistic and situational needs, survey projects may prove particularly useful. In fact, in gathering information from the various groups of people involved, survey interviews and questionnaires may become inevitable. After all, one of the most positive features of survey research is that it can be used to efficiently gather a wide variety of different types of information from a wide assortment of sources.

Program evaluation. Program evaluation might be defined as the systematic collection and analysis of all relevant information necessary to promote the improvement of the curriculum and assess its effectiveness within the context of the particular institutions involved. Since this definition is very similar to the one given above for needs analysis, the reader might correctly conclude that I view the program evaluation process as a kind of ongoing needs assessment. That is true. However, program evaluation is typically based on considerably more and clearer information than needs assessment. While needs analysis is usually done in the early stages of curriculum development and must depend on interview procedures, questionnaires, linguistic analyses, conjecture, and a good deal of professional judgment, program evaluation can take advantage of all of the above information and tools to assess the effectiveness of a program but can also utilize any other information gathered while developing program objectives, developing and analyzing tests, creating materials, and/or teaching the curriculum. *Program evaluation*, then, will be defined here as the ongoing process of information gathering, analysis, and synthesis, the entire purpose of

which is to constantly improve each element of a curriculum on the basis of what is known about all of the other elements, separately as well as collectively. Thus, survey research is a crucial part of program evaluation just as it is for needs analysis and for precisely the same reasons. While survey projects used in curriculum development generally remain in-house, some find their way into print (for examples, see Kimzin & Proctor, 1986; or Richterich & Chancerel, 1978).

Surveys for Language Research

Surveys are also useful for other types of research not directly related to curriculum development. For example, surveys have been used to investigate the characteristics of graduate level teacher-training programs (Ochsner, 1980), or the opinions and attitudes of members of a national professional organization (Brown, Knowles, Murray, Neu, & Violand-Sanchez, 1992). Of all the available research methods, survey research may be the most practical and easy to do because it relies heavily on common sense and less on complex statistics. In fact, survey results are most often reported as simple percentages and averages. Since language survey research can be used to describe, explore, or explain physical characteristics, phenomena, behaviors, attitudes, etc., there is no shortage of useful questions that can be answered by doing survey research. Given that people's ideas, attitudes, opinions, etc. change over time, the possibilities for doing language survey research seem inexhaustible because any research done today might usefully be repeated in five or ten years to see if the participants' ideas, attitudes, opinions, etc. have changed over time.

Steps in Survey Projects

The main problem in setting up a survey project is to make sure that it is planned carefully in a step-by-step manner so the project can be conducted systematically and effectively. Stacey and Moyer (1982) suggest the following ten steps for the construction of surveys:

1. Specifying survey objectives and research questions.
2. Reviewing the literature.
3. Defining abstract concepts.
4. Selecting question formats.
5. Selecting the statistical analysis.
6. Writing the survey questions.
7. Ordering the questions in the survey.
8. Adjusting the physical appearance of the survey.
9. Preparing the cover letter and instructions.
10. Validating the survey.

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These ten steps are fine if the only concern is with creating a survey instrument. However, I feel that a language survey instrument should be viewed as part of a larger survey project, one which involves the following steps:

A. Planning the survey project.
B. Designing the survey instrument.
C. Gathering and compiling the survey information.
D. Analyzing the survey statistically.
E. Analyzing the survey logically.
F. Reporting the results of a survey.

If each of these six steps is carefully carried out (along with the ten steps for constructing a survey proposed by Stacey and Moyer (1982) under point B of my list), any survey project will stand a much better chance of success.

Functions of Surveys

Anyone designing a survey instrument must realize that surveys can function in different ways. For instance, surveys can function as: biodata surveys, opinion surveys, self-ratings, judgmental ratings, rankings, or Q-sorts. Obviously, some or all of these functions can be combined in one interview or questionnaire.

Biodata surveys are used to elicit biographical background information about the participants, including things like the participant's age, place of birth, sex, marital status, occupation, number of years of language study, years of education, major field of study, and salary.

Opinion surveys are designed to uncover the opinions and attitudes of the participants about specific issues. For instance, questions might be developed to find out what a group of students think (i.e., their opinions) about the goals and objectives of a particular language program as well as about its tests, materials, teaching, administration, etc.

Self-ratings require the participants to rate their own abilities, interest levels, motivations, etc. Such ratings reveal information about the self-image of the individuals involved.

Judgments can be used to obtain the views of participants about various aspects of language learning. Judgments can be obtained either by asking participants to briefly write their views down or by using a more structured type of question. For example, students might be asked to judge the effectiveness of a language program's objectives and materials in terms of how useful they are, how necessary they are to future language use, or how easy they are to learn. The students would simply be providing their judgments.

Rankings require the participants to order some set of words, or phrases, from most important to least important, or most useful to least useful, etc. For instance, students might be asked to rank a list of the 15 types of classroom

activities used in a particular course from most enjoyable to least enjoyable by numbering them 1 to 15.

Q-sorts combine attributes of one of the earlier survey types with the ranking procedures discussed immediately above. This combination is accomplished by: (a) having the participants give their views, attitudes, opinions, self-ratings, and/or judgments; (b) then asking the participants to rank the issues in terms of how important they think each is. While survey instruments can be designed to perform any one of the six functions discussed above, they are seldom so unidimensional; surveys are most often developed to accomplish a combination of functions.

Guidelines for Writing Good Survey Questions

Once decisions have been made about which functions to use in a survey (or which combinations of functions), the actual questions must be written. Writing good questions can be surprisingly difficult. Guidelines for writing good survey questions are given in Table 2. Overall, the goal in writing survey questions should be to make them so clear and precise that the participants will know exactly what is being asked of them.

Table 2
Things to avoid in writing good survey questions

Avoid:
1. Overly long questions
2. Unclear or ambiguous questions
3. Negative questions
4. Incomplete questions
5. Overlapping choices in questions
6. Questions across two pages
7. Double barreled questions
8. Loaded word questions
9. Prestige questions
10. Embarrassing questions
12. Biased questions
13. Questions at the wrong level of language
14. Questions that respondents are incompetent to answer
15. Assuming that everyone has an answer to all questions
16. Making respondents answer questions that don't apply.
17. Using irrelevant questions
18. Writing superfluous information into questions.

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Notice that Table 2 is cast in negative terms because it is a list of things that should be avoided in writing survey good survey questions. To begin with, (1) overly long questions, (2) unclear or ambiguous questions, (3) negative questions, and (4) incomplete questions should all be avoided. Overlapping choices (5) should also be avoided. The issue of overlapping choices arises when options are not mutually exclusive. In the following example, the options are overlapping in the sense that Santa Ana High School is located in the city of Santa Ana and in Orange county so the options are not mutually exclusive:

> The best location for the new foreign languages building would be:
> __In Orange County
> __In the city of Santa Ana
> __In Santa Ana High School
> __Other:_____

Questions should also be typed so they are located in one compact place on a single page (6) so that participants will not miss part of the question. Double-barreled questions (7) arise when a question is really asking more than one question. For instance, the following example contains three questions that could be asked separately (one about education spending, one about military spending, and one about language education spending):

> The United States should spend more on education (especially language education) and less on the military.
> Agree_____ Disagree_____ Don't know____

Loaded words (8) are words that suggest an automatic positive or negative response because they are emotionally charged. For instance, in the following example, the word *obviously* would be a loaded word:

> Spanish is obviously the language to study if you live in the Southwestern United States.
> Agree_____ Disagree_____ Don't know____

Leading questions (9), namely, questions that overtly encourage participants to answer in a certain way, should also be avoided. It is also important to avoid questions that may contain issues of prestige (10). For example, when asked, some people will claim that they read more than they do or that they speak a language better than they do because that is the prestigious way to answer. Embarrassing questions (11), or questions that a particular group of participants might find embarrassing (e.g., questions containing swear words) should be avoided, as should questions that show prejudice or bias (12) against a particular group of people.

In addition, questions at the wrong level of language (13) and questions that participants are incompetent to answer (14) should be avoided. And, as matters of sound survey development policy, it is probably best not to (15) assume that

everyone has an answer to all questions, (16) make participants answer questions that don't apply to them, (17) use irrelevant questions, or (18) write superfluous information in questions.

Guidelines for Producing Effective Questionnaires

Writing good questions, as covered in the previous section, is just one of the issues involved in producing sound surveys. Many others are covered in Brown (unpublished ms.)

Table 3
Guidelines for Producing Effective Questionnaires

1. Write good questions (see Table 2)
2. Order the questions rationally
3. Format the questionnaire for clarity
4. Write clear directions
5. Edit carefully

For questionnaire surveys, Table 3 suggests that the ordering of questions is also important. In order to make a questionnaire clear to the participants, it may help to rationally group the questions by their type, function, format, topic, or some combination of these factors. (For more ideas on structuring surveys, see Gallup, 1947).

Formatting the questionnaire for clarity is another important issue, which may involve effective use of spacing, type faces, graphics, highlighting, etc. Writing clear directions is another crucial issue to think about because unclear directions can confuse and discourage participants. Last but not least, it is necessary to use careful editing, perhaps including getting others to edit the questionnaire, piloting it with a few students, and doing very careful final editing.

Guidelines for Increasing Mail Survey Return Rates

There are also a number of ideas that might help in getting a relatively high return rate, especially for those who are using a mail survey, where a questionnaire is mailed out and participants are asked to send it back after filling it out. First, a cover letter explaining the background and importance of the questionnaire may help. Participants are also more likely to return a short questionnaire that is easy to fill out than to return a long and difficult one. If possible, some sort of incentive should be offered to participants for answering the questionnaire (e.g., a monetary reward, or a copy of the study that will result from the questionnaire). Providing return postage and a self-addressed envelope will

also encourage participants to return the questionnaire. It is also a good idea to put the return address somewhere else on the questionnaire so it can be sent back even if the participant loses the envelope.

For participants who do not return the questionnaire, a follow-up letter or phone reminder may encourage them to complete the task. The timing of the mailing may also be significant. For instance, if a questionnaire mailing goes out late in the school year or arrives during the summer break, it is unreasonable to expect academics to respond quickly in great numbers.

Tabulating and Analyzing Survey Results

Once the survey results have been collected, some system must be worked out for tabulating and analyzing all of the data. The system will differ for closed-response questions and open-response questions (both of which may be found on the same questionnaire).

Closed Responses

Closed-response questions are those which offer the participants options from which to select their answers. This category includes Likert scales (the 1 to 5 type), yes/no questions, or any other select-a-response type question. Such questions can be analyzed with straightforward averages or percentages of people selecting each option, or both. For the statistically initiated, standard deviations and chi-squared statistics may prove useful, but the averages and percentages are usually sufficient for finding interesting patterns in closed-response survey results.

In addition, it is often a good idea to check the reliability of a survey instrument—especially if it is being used to make important decisions or to do publishable research. Given that there are often weighted scales on questionnaires, the Cronbach alpha reliability estimate is probably the best to use. Cronbach alpha is available for use on MS-DOS system computers in the SPSS/*PC*+™ (1990) or *SYSTAT*™ (Wilkinson, 1988) software, or it can be calculated by hand using the formula found in Brown (1995b).

If there are subscales involved in the survey, it may be a good idea to examine the reliability of each subscale as well as the combination of all closed-response subscales taken together.

Open Responses

Open-response questions are questions that require the participant to produce an answer, in either an oral or written form. If the responses are oral, they should be taped in the process of gathering the responses. It is usually necessary or at least advisable to transcribe the tapes to a written form.

Even if the open responses are written by the participants, I have usually found it necessary to enter them into computer files for easier analysis. I then do computer analysis of these files using a software package like *RightWriter*™ (Que

Software, 1990) to get frequency counts of the words in the files. Sometimes, as part of the analysis, I use the search function in my word processor to search for the most commonly used words and read how the respondents used them.

With or without the technological boost that computers provide, the open responses should all be read, analyzed, sorted, and summarized in some way. This process may involve simply putting them on cards and getting down on the floor to sort them out, or may involve high technology. Either way, the human brain ultimately ends up doing the analysis and interpreting the results. For examples of interpretations of such open-response questions, see Brown (1992a, 1992c, 1992d, & 1992e).

Suggestions for Further Reading

A number of different topics have been covered in this chapter. Naturally, each of these topics is covered in more detail elsewhere. For instance, more information on the different types, uses, and functions of surveys, as well as ideas for writing good survey questions and getting good return rates can be found in Babbie (1973); Bailey (1982); Brown (unpublished); Oppenheim (1966); or Stacey and Moyer (1982). Examples of how surveys have been used for language curriculum development (especially for needs analysis and program evaluation) are available in Brown (1995a); Kimzin and Proctor (1986); Loschky, Stanley, Cunha, and Singh (1987); Richterich and Chancerel (1978); and Weaver, Pickett, Kiu, and Cook, J. (1987).

Examples of how surveys have been used in language research can be found in Bailey and Brown (1995); Brown (1992a, 1992c, 1992d, 1992e, and 1995a); Brown, Knowles, Murray, Neu, and Violand-Hainer (1991, 1992); Johns (1981); Miller (1995); and Ochsner (1980).

More details on using computers for program level decision making and research can be found in Brown (1992b).

Additional information on the statistics necessary to analyze closed-response survey results, see Brown (1988); Butler (1985); Hatch and Lazaraton (1991); Seliger and Shohamy (1989); and Woods, Fletcher, and Hughes (1986).

More details on increasing the reliability and validity of the open-response analytic processes are available from Agar (1986); Davis (1992); or Kirk and Miller (1986).

Survey interviews and questionnaires provide seemingly simple and straightforward tools that can be used effectively for curriculum development or other types of research. However, language professionals who actually use these tools often find that they are not as simple as they seem. Hopefully, this paper has provided much of the information necessary to effectively plan and conduct surveys, or at least pointed the reader to sources that can help them use surveys responsibly and professionally.

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References

Agar, M. H. (1986). *Speaking of ethnography*. Beverly Hills, CA: Sage.

Babbie, E. R. (1973). *Survey research methods*. Belmont, CA: Wadsworth.

Bailey, K. D. (1982). *Methods of social research* (2nd ed.). New York: Free Press.

Bailey, K., & Brown, J. D. (1995). Language testing courses: What are they? In A. Cumming, & R. Berwick (Eds.) *Validation in language testing*. Clevedon, England: Multilingual Matters.

Brown, J. D. (1988). *Understanding research in second language learning: A teacher's guide to statistics and research design*. Cambridge: Cambridge University Press.

Brown, J. D. (1989). Language program evaluation: A synthesis of existing possibilities. In K. Johnson (Ed.) *The second language curriculum* (pp. 222–241). London: Cambridge.

Brown, J. D. (1992a). The biggest problems TESOL members see facing ESL/EFL teachers today. *TESOL Matters, 2* (2), 1,5.

Brown, J. D. (1992b). Using computers in language testing. *Cross Currents, 19* (1), 92–99.

Brown, J. D. (1992c). What is research? *TESOL Matters, 2* (5), 10.

Brown, J. D. (1992d). What roles do members want TESOL to play? *TESOL Matters, 2* (5), 16.

Brown, J. D. (1992e). What research questions interest TESOL members? *TESOL Matters, 2* (6), 20.

Brown, J. D. (1995a). *The elements of language curriculum design: A systematic approach to program development*. Boston: Heinle & Heinle.

Brown, J. D. (1995b). *Testing in language programs*. Englewood Cliffs, NJ: Prentice Hall.

Brown, J. D. (unpublished). *Designing language surveys*. Honolulu, HI: University of Hawaii at Manoa.

Brown, J. D., Knowles, M., Murray, D., Neu, J., & Violand-Hainer, E. (1991). TESOL research questionnaire sent to 1,800 members. *TESOL Matters, 2* (1), 1, 5.

Brown, J. D., Knowles, M., Murray, D., Neu, J., & Violand-Hainer, E. (1992). *TESOL Research Task Force report to the TESOL Executive Board*. Unpublished ms. Alexandria, VA: TESOL.

Butler, C. (1985). *Statistics in linguistics*. Oxford: Blackwell.

Davis, K. A. (1992). Validity and reliability in qualitative research on second language acquisition and teaching: Another researcher comments. *TESOL Quarterly, 26* (3), 605–608.

Gallup, G. (1947). *Qualitative measurement of public opinion: The quintamensional plan of question design*. Princeton, NJ: American Institute of Public Opinion.

Hatch, E., & Lazaraton, A. (1991). *The research manual: Design and statistics for applied linguistics*. Rowley, MA: Newbury House.

Johns, A. M. (1981). Necessary English: A faculty survey. *TESOL Quarterly, 15* (1), 51–57.

Kimzin, G. & Proctor, S. (1986). *An ELI academic listening comprehension needs assessment: Establishing goals, objectives, and microskills*. Honolulu, HI: Unpublished Scholarly Paper, Department of ESL, University of Hawaii at Manoa.

Kirk, J., & Miller, M. L. (1986). *Reliability and validity in qualitative research*. Beverly Hills: Sage.

Loschky, L., Stanley, J., Cunha, C., & Singh, S. (1987). *Evaluation of the University of Hawaii English Language Institute Reading Program*. Honolulu, HI: Unpublished ESL

630 project, Department of ESL, University of Hawaii at Manoa.

Miller, T. (1995). Japanese learners' reactions to communicative English lessons. *JALT Journal, 17* (1), 31–52.

Ochsner, R. (1980). Job-related aspects of the M.A. in TESOL degree. *TESOL Quarterly, 14* (2), 199–207.

Oppenheim, A. N. (1966). *Questionnaire design and attitude measurement*. New York: Basic Books.

Que Software (1990) *RightWriter ™*.

Richterich, R., & Chancerel, J. L. (1978). *Identifying the needs of adults learning a foreign language*. Oxford: Pergamon Press.

Seliger, H. W., & Shohamy, E. (1989). *Second language research methods*. Oxford: Oxford University Press.

SPSS/PC+ ™ (1990). Chicago, IL: SPSS Inc.

Stacey, S. E. & Moyer, K. L. (1982). *A guide to survey development: Manual on writing a survey*. Harrisburg, PA: Pennsylvania State Department of Education. [Also ERIC Document ED 222 538].

Weaver, J., Pickett, A., Kru, L., & Cook, J. (1987). *Foreign TA training project needs analysis*. Honolulu, HI: Unpublished ESL 630 project, Department of ESL, University of Hawaii at Manoa.

Wilkinson, L. (1988). *SYSTAT™: The system for statistics*. Evanston, IL: SYSTAT, Inc.

Woods, A., Fletcher, P., & Hughes, A. (1986). *Statistics in language studies*. Cambridge: Cambridge University Press.